

## Summary Report

Author: Melinda M Manore, PhD., RD, CSSD, FACSM, Professor,  
Department of Nutrition and Exercise Science, Oregon State University, Corvallis, OR  
97331

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Summary of Nutrition and Exercise Education/Programs at Land-Grant Universities (LGU) for USDA/CSREES.

### Undergraduate Programs:

Overall, most undergraduate nutrition programs that offer the American Dietetic Association (ADA) Didactic Program in Dietetics (DPD) do not require an exercise physiology course as part of the DPD course requirements and do not integrate nutrition and exercise in anyway into their curriculum (e.g. offer courses, experiences, or options for minors in exercise science). The ADA does have exercise physiology listed as a knowledge area registered dietitians (RDs) should know.

Those programs that offer degree options that combine exercise science and nutrition are bulleted below. These programs are rigorous in science and students take chemistry (general through biochemistry), in addition to the other sciences required in a DPD program. The two strongest programs are Colorado State University and University of Connecticut (minor sport nutrition). Other strong programs are at Iowa State University (dual degree), Kansas State University (dual degree), Oklahoma State University, Oregon State University (DPD requires exercise science), and Washington State University (meets DPD and American College of Sports Medicine (ACSM) requirements). These programs also provide students with the science background (through biochemistry) to pursue advanced degrees in either Nutrition or Exercise Science. None of these programs focus directly on prevention of obesity or chronic disease.

- **Colorado State University (CSU)**, Department of Food Science and Human Nutrition. Department offers both a DPD and [Coordinated Undergraduate Program \(CUP\)](#) in nutrition. They also have an undergraduate program titled, “**Nutrition and Fitness**,” where students take all the courses for the DPD except four, so they can easily pick up the DPD requirements if they are interested. The four additional classes include Physiology of Exercise, Techniques of Teaching – Aerobics, Techniques of Teaching Weight Training, and Exercise Testing. No Nutrition/Exercise course offered in this program. CSU also has a strong Department of Health and Exercise Science.
- **Iowa State University (ISU)**, College of Human Science and College of Agriculture, Department of Food Science and Human Nutrition. Offers a DPD program, but no exercise science class required in the DPD program. They also

offer a **dual undergraduate program (5-6y) in diet and exercise**, but encourage students to take this as a Master of Science (MS) degree. In this program, dual majors or undergraduates with either exercise science or dietetics can apply. The program meets the DPD and ACSM Health Fitness Instructor requirements. This program is explained more in the graduate programs, since most would take it as a graduate program. ISU has a strong exercise science department.

- **Kansas State University (KSU)**, College of Human Ecology, Department of Human Nutrition. On campus DPD program does not require an exercise courses. The DPD program is part of the Department of Hotel, Restaurant, Institutional Management and Dietetics. The **Bachelor of Science (BS) in Nutrition and Exercise Science** (first in the Big 12) is a dual degree with a BS in Human Nutrition and BS in Kinesiology, which offers two unique classes, Energy Balance and Nutrition and Exercise. This dual degree does not offer all the DPD courses, but a student could take these if they desire and the additional courses needed are outlined for the student. KSU has a Department of Kinesiology.
- **Oklahoma State University**, College of Human Environmental Sciences, Department of Nutritional Sciences. The department offers an undergraduate DPD program, but no exercise science classes are required in the program. They also offer a **nutrition and exercise** (DPD requirements not met) and a **dietetics with exercise** (DPD requirements met). This combined program offers at least 6 classes integrating nutrition/exercise or just exercise (this option requires 4.5 y). Exercise science courses are from the School of Allied Health and Educational Psychology.
- **Oregon State University**, College of Health and Human Sciences, Department of Nutrition and Exercise Sciences. The department offers undergraduate degree options in dietetics (DPD) and nutritional sciences, with the DPD program requiring exercise physiology. Students can do a degree in dietetics with a minor in exercise sciences and/or do a dual degree. The department offers a **fitness and nutrition** degree option, where the focus is strong in the exercise science and secondary in nutrition (~12 credits required). Students are not required to take more than basic chemistry, so no nutrition metabolism courses are taken. This degree does not meet the DPD requirements.
- **Purdue University**, College of Consumer and Family Studies, Department of Foods and Nutrition. This department offers DPD and CUP programs, but neither have exercise science required in the program. The nutrition, fitness, and health major requires science classes through biochemistry, but does not prepare students for an ACSM certification. A dual program in dietetics and nutrition, fitness and health requires ~130-134 cr hrs, and students meet the DPD requirements. The dual major option has seven health and kinesiology (HK)

classes (21 cr); no class that combines nutrition/exercise or obesity. The Department of Health and Kinesiology (HK) is in the College of Liberal Arts.

- **University of Connecticut**, College of Agriculture and Natural Resources, Department of Nutritional Sciences. The department offers a degree in [dietetics](#) (DPD requirements met), which does not require any exercise science classes. They also offer a **BS in Nutrition Sciences with a minor in Sports Nutrition**. In addition to the [nutritional sciences](#) core curriculum, students complete a series of courses, which include sports nutrition, exercise physiology and kinesiology, and sports psychology. A CUP program is offered in the Department of Allied Health.
- **University of Delaware**, College of Health Sciences, Department of Health, Nutrition and Exercise Science. The department offers three degrees: dietetics (DPD), nutritional sciences, and applied nutrition (AN), but exercise sciences is only offered as an option in the AN program. Another option is the nutritional sciences degree with the [health and exercise concentration](#).
- **University of Hawaii-Manoa**, College of Tropical Agriculture and Human Resources, Department of Human Nutrition, Food and Animal Science. Offer a dietetics program (DPD requirements met) with one nutrition/exercise class required but no exercise science class required. They also offer a BS in [Human Nutrition](#) with an emphasis in Sports and Wellness.
- **University of Missouri**, College of Human Environmental Sciences, Department of Nutritional Sciences. The department offers BS degrees in Dietetics (CUP program) and [Nutrition and Fitness](#) (does not meet DPD requirements).
- **University of Nebraska-Lincoln**, College of Education and Human Sciences, Department of Nutrition and Health Sciences. The [department](#) offers degrees in dietetics (DPD requirements met), nutritional sciences, and nutrition and health science (this major prepares students for [sports nutrition, nutrition and fitness](#), but doesn't meet DPD course requirements). All degrees require biochemistry.
- **Washington State University – Spokane Campus**, Department of Exercise Physiology and Metabolism. The department offers a BS degree in [Exercise Physiology and Metabolism](#), which incorporates the DPD and ACSM's Exercise Specialist requirements into the curriculum. Students can then apply to [dietetic internship programs](#) to become an RD and are ready to sit for ACSM's Exercise Specialist Certification.

#### **Graduate Programs in Land-Grant Universities:**

The nutrition graduate programs in land-grant universities (LGUs) bulleted below meet one or both of the following criteria:

- 1) offer graduate degrees in nutrition and exercise (combined degree) or offer the option for a major/minor combination, and/or
- 2) faculty members are doing research in nutrition/exercise.

It is difficult to pick a 'best' graduate program in nutrition and exercise because graduate programs are very diverse and can be individualized based on the faculty and the student. Of the programs listed below, the strongest programs doing human research in nutrition and exercise are Colorado State University (CSU), University of Arizona (U of A), University of Georgia, and University of Connecticut. Other very strong programs are Virginia Tech, Iowa State University (ISU), Purdue University, and Oregon State University (OSU). The strength of these graduate programs is due primarily to a few key researchers at each university who do research in the area of nutrition and exercise. In addition, most of these universities have strong nutrition and exercise programs, either as separate or joined departments. In addition, a few of these LGUs (U of A and ISU) also have strong extension programs with key faculty also doing nutrition and exercise programs in the community and research. OSU is developing a strong extension program in nutrition and exercise with new faculty to help in this area.

- **Colorado State University**, Department of Food Science and Human Nutrition. The department offers an **MS degree – Interdisciplinary Studies Program in Exercise Science and Nutrition** in conjunction with the Department of Health and Exercise Sciences (Dr. Gay Israel, chair). Both departments are within the College of Applied Human Science. The [program](#) provides a unique opportunity for students to pursue combined educational interests in fitness, diet/nutrition, health, and human performance. Faculties from both departments co-chair graduate thesis committees and students are encouraged to explore research topics that bridge the respective disciplines of the departments. CSU also offers a PhD in Nutritional Sciences where students can design their own program, so combining nutrition and exercise is possible.
- **Iowa State University**, College of Human Science and College of Agriculture, Department of Food Science and Human Nutrition. The department offers a **MS program in Diet and Exercise**, which gives students advanced study in the theory and application of nutrition and exercise science. This degree [program](#) includes concurrent enrollment in the BS and MS with a thesis and awards the BS and MS degrees jointly at the completion of the program. The BS and MS program at ISU is unique in that it will award an advanced degree, and includes the academic requirements (DPD course work) to become an RD. The program is jointly administered by the Department of Food Science and Human Nutrition and the Department of Kinesiology within the College of Human Sciences. ISU has established the **Nutrition and Wellness Research Center** to reduce the incidence of chronic disease and improve the quality of life for citizens in the state and across the nation. Faculty in the Departments of Nutrition and Kinesiology do research in this center. ISU also offers a PhD in Nutritional Sciences where

students can design their own academic program, so combining nutrition and exercise is possible.

- **Kansas State University**, College of Human Ecology, Department of Human Nutrition. The department offers both an **MS and PhD in [Human nutrition with an emphasis in Human Metabolism and Performance](#)**. KSU has a Department of Kinesiology working with faculty in the Department of Human Nutrition.
- **Oregon State University**, College of Health and Human Sciences, Department of Nutrition and Exercise Sciences. The department offers **MS and PhD programs in [Nutrition and Exercise Science](#)**. Students can do a graduate degree in nutrition with a minor in exercise sciences and/or the reverse. There are faculty within the department do both nutrition/exercise research.
- **Purdue University**, College of Consumer and Family Studies, Department of Foods and Nutrition. The department offers **MS and PhD [programs in Nutrition](#)**, which are divided into various emphasis groups. One of these groups is titled **Human and Clinical Nutrition**. Research faculty within this group do nutrition and exercise research, with graduate faculty from the Department of Health and Kinesiology in the College of Liberal Arts. Students can have a research emphasis that involves both nutrition and exercise sciences.
- **University of Arizona**, Department of Nutritional Sciences, College of Agriculture and Life Sciences. The department offers **MS and PhD [programs in Nutritional Sciences](#)**. Students can select to do research within the area of nutrition and exercise with faculty within the department or from the Department of Physiology. An area of specialization within the department is body composition, bone, and weight control. Extension and Outreach efforts are also focused on nutrition and exercise. Within the college there is also a Center for Physical Activity and Nutrition with faculty from across the university.
- **University of Connecticut**, College of Agriculture and Natural Resources, Department of Nutritional Sciences. The department offers **MS and PhD degrees in [Nutritional Sciences](#)**. There are three major areas of expertise within the department: biochemical and molecular nutrition, **human nutrition and metabolism**, and community nutrition. Human nutrition and metabolism involves human studies or trials to examine nutrient metabolism in health and disease. Community nutrition focuses on public health areas of nutrition including community-level nutrition assessment, education, and intervention programs. There is a strong link between the Department of Nutritional Sciences and the Department of Kinesiology.
- **University of Florida (U of F)**, College of Agriculture and Life Sciences, Department of Food Science and Human Nutrition. The [department](#) offers



combined **Master of Science/Dietetic Internship** for students with an emphasis in three areas: general, research, or **sport nutrition**. Only one student per year is accepted into the sport nutrition option for this program. This student works with the U of F athletic department where there are two full-time sport nutritionists. The department also offers **MS and PhD program in Nutrition**, which allows an emphasis in nutrition and exercise and graduate courses in this area (two mentioned). U of F has a College of Health and Human Performance (Department of Applied Physiology and Kinesiology), and College of Public Health and Health Professions.

- **University of Georgia**, College of Family and Consumer Sciences, Department of Foods and Nutrition. The department offers an **MS and PhD in Foods and Nutrition with a focus in Exercise Science**. Areas of expertise listed related to nutrition/exercise: obesity, diabetes, cancer, heart disease, functional foods, nutraceuticals, vitamins, minerals, and sports nutrition. The department has a strong obesity research group examining the mechanisms of obesity using experimental animal models. The Department of Kinesiology have faculty that collaborate with faculty in Nutrition.
- **University of Kentucky**, College of Agriculture, Department of Nutrition and Food Science (no graduate degrees in nutrition/exercise). They also have a Graduate Center for Nutritional Sciences within the College of Health Sciences. Within the College of Health Sciences, the Clinical Nutrition Program offers MS (thesis and nonthesis options) and PhD degrees in Human and Medical Nutrition in collaboration with the Graduate Center for Nutritional Sciences. Their current program areas of instructional emphasis include clinical and medical nutrition therapy, obesity, wellness, complimentary/alternative medicine, and sports nutrition. The MS degree has various options, with one being **MS in Nutrition with emphasis in Wellness/ Sports Nutrition**. Disease prevention, nutrient utilization and exercise and behavior intervention strategies for lifestyle management are the focus of courses taught in this area. This emphasis area is designed for students with a baccalaureate degree in an allied health field.
- **University of Nebraska-Lincoln**, College of Education and Human Sciences, Department of Nutrition and Health Sciences. The department offers an **MS in Nutrition and Exercise (other options also available) and PhD in Nutrition** – students can specialize in area of interest including exercise. In the MS program, students take these required classes: Exercise Testing, Exercise Physiology, Clinical Exercise Physiology, Nutrition, and Exercise and Principles of Human Nutrition. They can then elect to take additional nutrition classes. It does not appear that there is a Department of Kinesiology, but that the exercise science people have been incorporated into this department.
- **Virginia Tech**, College of Agriculture and Life Sciences, Department of Human Nutrition, Foods and Exercise. This is a recently combined department from the old Departments of Foods and Nutrition and Exercise Science. The department

offers **MS and PhD degrees** in six areas: Community and International Nutrition, Foods, Nutrition, Clinical Exercise Physiology, Muscle Physiology, and **Nutrition in Sports and Chronic Disease**.

### **Graduate Program at Non-LGU:**

A number of non-LGUs have graduate degree programs that offer nutrition and exercise. Listed below are other U.S. institutes of higher learning that offer a graduate degree in nutrition and exercise. Some schools offer certificates, areas of specialization or concentration in sport nutrition, but these programs were not listed. Only schools offering degrees that combine nutrition and exercise in some way are listed. In some cases, these degrees are not offered through nutrition departments. Some universities have developed strong obesity research programs, which may or may not include exercise. These programs were not specifically identified (for example, Pennington Biomedical Research Institute, Baton Rouge, LA). Finally, this report focuses on U.S. colleges and universities. There are a number of foreign institutions of higher education that offer excellent programs in nutrition, exercise, and obesity prevention.

- **Auburn University**, [Department of Nutrition and Food Science](#). MS Nutrition, emphasis in Sports Nutrition
- **Baylor University**, [Department of Health, Human Performance and Recreation](#). PhD in Exercise, Nutrition and Preventive Health. (Baylor does not have a Department of Nutrition.)
- **Benedictine University**, [Department of Nutrition](#). MS Nutrition and Wellness.
- **California State Polytechnic University**, [Department of Kinesiology and Health Promotion](#). MS Sport Nutrition.
- **George Washington University Medical Center**, [Department of Exercise Science](#). MS Exercise, Nutrition, and Eating Behavior.
- **James Madison University**, Department of Kinesiology. MS [Nutrition and Physical Activity](#).
- **Marywood University**, [Department of Nutrition and Dietetics](#). MS Sports Nutrition and Exercise Science.
- **San Diego State University**, [Department of Exercise and Nutritional Sciences](#). Dual MS in Exercise Physiology and Nutritional Sciences.
- **Southeast Missouri State University**, Department of Health, Human Performance and Recreation. MS [Nutrition and Exercise Science](#).
- **Teachers College, Columbia University**, [Department of Health and Behaviors Studies, Program in Nutrition](#). MS Applied and Physiology Nutrition.
- **Texas Woman's University**, [Department of Nutrition and Food Science](#). MS Exercise and Sport Nutrition.
- **University of Texas, Austin**, [Department of Kinesiology and Health Education](#), MEd Sports Science and Nutrition.